

**AMENDMENTS TO THE CLAIMS**

Please amend claims 21-28, such that the status of the claims is as follows:

1. (Previously presented) A transducing head comprising:

a main pole formed at least in part of a first magnetic material;  
at least one magnetic element spaced from the main pole, wherein the magnetic element provides  
a potential return path for a magnetic field produced by the main pole, and is formed at  
least in part of a second magnetic material having a magnetic property that reduces side  
writing at the magnetic element, the second magnetic material differing from the first  
magnetic material.

2. (Original) The transducing head of claim 1, wherein the first magnetic material has a first saturation flux density  $B_{s1}$  and the second magnetic material has a second saturation flux density  $B_{s2}$ , where  $B_{s2}$  is lower than  $B_{s1}$  by at least 0.5 Tesla.

3. (Original) The transducing head of claim 2, wherein the difference between the first saturation flux density  $B_{s1}$  and the second saturation flux density  $B_{s2}$  is greater than about one Tesla.

4. (Original) The transducing head of claim 2, wherein  $B_{s2}$  is in a range of about 0.1 Tesla to about one Tesla.

5. (Original) The transducing head of claim 2, wherein  $B_{s2}$  is in a range of about 0.3 Tesla to about 0.6 Tesla.

6. (Original) The transducing head of claim 2, wherein  $B_{s1}$  is greater than about 1.5 Tesla.

7. (Original) The transducing head of claim 2, wherein the second magnetic material is selected from a group consisting of NiFeCu alloys, NiFeP alloys, NiFeB alloys, NiFeO alloys, and NiFeS alloys.

8. (Original) The transducing head of claim 1, wherein the second magnetic material has a coercivity in a range of about 10 Oersteds to about 1000 Oersteds.

9. (Original) The transducing head of claim 8, wherein the second magnetic material has a permeability greater than 50.

10. (Original) The transducing head of claim 8, wherein the material has a hard axis anisotropy field in a range of about 10 Oersteds to about 1000 Oersteds.

11. (Original) The transducing head of claim 8, wherein the second magnetic material is an alloy selected from the group consisting of CoFeHf, FeAlO, CoFeB, CoZrNb, CoAlPtO, FeCoNi, FeCoZrO, FeSiNi, NiFeNb, FeSi, CoZrO, and FeCoSi.

12. (Original) A transducing head comprising:

a pair of magnetic poles separated by a gap for writing data to a magnetic medium; and  
means forming at least a portion of one of the poles for reducing side writing at that pole.

13. (Original) The transducing head of claim 12, wherein the means is a first magnetic material having a first saturation flux density  $B_{s1}$ , wherein at least a portion of the other pole is formed of a second magnetic material having a second saturation flux density  $B_{s2}$ , where  $B_{s1}$  is lower than  $B_{s2}$  by at least 0.5 Tesla.

14. (Original) The transducing head of claim 13, wherein the difference between the second saturation flux density  $B_{s2}$  and the first saturation flux density  $B_{s1}$  is greater than about one Tesla.

15. (Original) The transducing head of claim 13, wherein  $B_{s1}$  is in a range of about 0.1 Tesla to about one Tesla.

16. (Original) The transducing of claim 13, wherein  $B_{s1}$  is in a range of about 0.3 Tesla to about 0.6 Tesla.

17. (Original) The transducing head of claim 13, wherein  $B_{s2}$  is greater than about 1.5 Tesla.

18. (Original) The transducing head of claim 13, wherein the first magnetic material is an alloy selected from a group consisting of NiFeCu alloys, NiFeP alloys, NiFeB alloys, NiFeO alloys, and NiFeS alloys.

19. (Original) The transducing head of claim 12, wherein the means is a magnetic material having a coercivity in a range of about 10 Oersteds to about 1000 Oersteds.

20. (Original) The transducing head of claim [13] 19, wherein the magnetic material is an alloy selected from the group consisting of CoFeHf, FeAlO, CoFeB, CoZrNb, CoAlPtO, FeCoNi, FeCoZrO, FeSiNi, NiFeNb, FeSi, CoZrO, and FeCoSi.

21. (Currently amended) A magnetic core of a perpendicular read/write head, comprising:

- a main pole formed at least in part of a first magnetic material;
- a return pole separated from the main pole by a write gap at an end adjacent to a magnetic medium
- and formed at least in part of a second magnetic material exhibiting a low magnetic moment
- ~~material having and a  $B_s$  in a range of about 0.1 Tesla to about one Tesla, the second~~
- ~~magnetic material differing from the first magnetic material; and~~
- a magnetic back via connecting the main pole and the return pole at a point distal from the magnetic medium.

22. (Currently amended) The magnetic core of claim 21, wherein the end of the return pole adjacent to the magnetic medium is formed of the second low magnetic moment material.

23. (Currently amended) The magnetic core of claim 21 wherein the second low magnetic moment material is selected from a group consisting of NiFeCu alloys, NiFeP alloys, NiFeB alloys, NiFeO alloys, and NiFeS alloys.

24. (Currently amended) The magnetic core of claim 21 wherein the magnetic core has a the first magnetic material exhibits high moment portion formed from a high magnetic moment material having and a saturation flux density greater than about one Tesla.

25. (Currently amended) The magnetic core of claim 24, wherein the high moment portion of the magnetic core includes at least a portion of the main pole, which portion is close to the end adjacent to the magnetic medium is formed of the first magnetic material.

26. (Currently amended) The magnetic core of claim 24, wherein the first high magnetic moment material has a saturation flux density greater than about 1.5 Tesla.

27. (Currently amended) The magnetic core of claim 21, wherein the second low magnetic moment material has a saturation flux density in a range of about 0.3 Tesla to about 0.6 Tesla.

28. (Currently amended) The magnetic core of claim 21, further comprising a magnetic yoke flanking a portion of the main pole, wherein the magnetic yoke is formed at least in part of the second magnetic material low moment portion of the magnetic core includes at least a portion of the yoke.

29. (Previously presented) A method comprising:

forming a main pole at least in part with a first magnetic material;  
forming a magnetic element at least in part with a second magnetic material having a magnetic property that reduces side writing at the magnetic element, wherein the magnetic element is spaced from the main pole and provides a potential return path for a magnetic field produced by the main pole, and wherein the second magnetic material differs from the first magnetic material.

30. (Original) The method of claim 29, wherein the first magnetic material has a first saturation flux density  $B_{s_1}$  and the second magnetic material has a second saturation flux density  $B_{s_2}$ , where  $B_{s_2}$  is lower than  $B_{s_1}$  by at least 0.5 Tesla.

31. (Original) The method of claim 29, wherein the second magnetic material has a coercivity in a range of about 10 Oersteds to about 1000 Oersteds.